

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 March 2004 (18.03.2004)

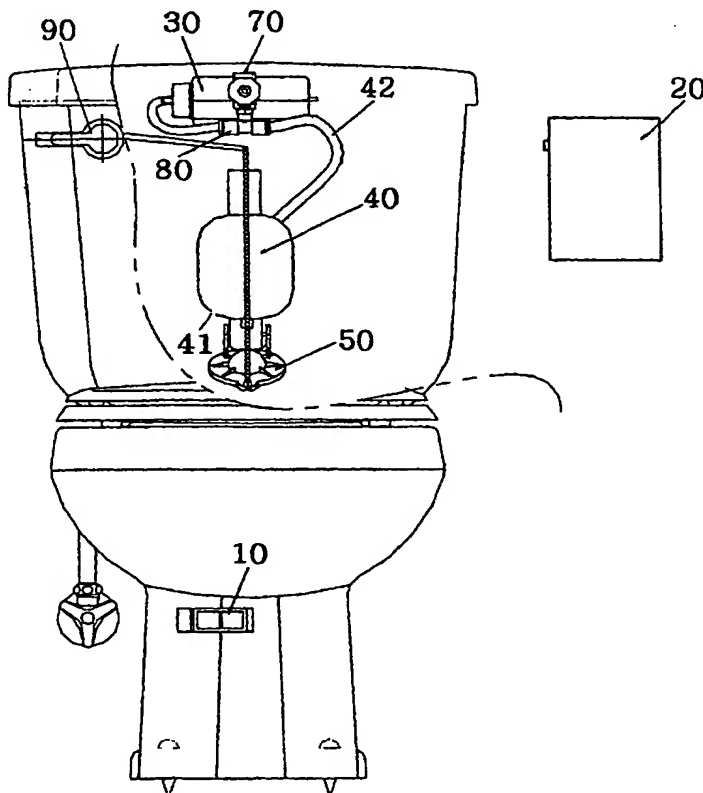
PCT

(10) International Publication Number
WO 2004/022861 A1

- (51) International Patent Classification⁷: **E03D 5/10**
- (21) International Application Number: **PCT/KR2003/001694**
- (22) International Filing Date: **22 August 2003 (22.08.2003)**
- (25) Filing Language: **Korean**
- (26) Publication Language: **English**
- (30) Priority Data:
10-2002-0053231
4 September 2002 (04.09.2002) KR
- (71) Applicant and
(72) Inventor: **CHANG, Hee-Seok [KR/KR]; #101-1508,**
Hansol Apt, Samsung-dong 4-6, Gangnam-gu, Seoul
135-091 (KR).
- (72) Inventor; and
(75) Inventor/Applicant (for US only): **LIM, Chang-Shik**
[KR/KR]; Seoseong-dong 42-2, Sangju-si, Gyeongsang-
buk-do 742-091 (KR).
- (74) Agent: **IM, Jae-Ryoung; 9th Floor Daelim Building,**
1600-3 Seocho-dong, Seocho-gu, Seoul 137-877 (KR).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU,**
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): **ARIPO patent (GH, GM,**
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: **ELECTRONIC TOILET AND FLUSHING SYSTEM**



(57) **Abstract:** A functional electronic toilet and flushing system capable of controlling the amount of flushing water according to the sensed occupancy time compared with predefined normal time durations for urination and bowel movement, in order to use an optimum amount of flushing water and to protect an occupant by detecting the sitting attitude or position. To perform these functions, this electronic toilet and flushing system comprises a sensor unit attached at the exterior of the toilet bowl for detecting a toilet user, a control unit for issuing a control signal indicating either urine or stool by comparing the occupancy time with the predefined normal time duration, an air bubble generator for generating air bubbles according to the control signal from the above control unit indicating the nature of the toilet's contents; a solenoid valve connected to the air bubble generator for controlling the supply of air bubbles; a float for floating up or sinking down according to the air bubbles supplied by the air bubble generator; and a siphon lid for flushing the toilet water according to the floating position of the float.

WO 2004/022861 A1